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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/880,634	06/11/2001	Wan-Uk Choi	45145/DBP/Y35	5926
23363	7590	12/27/2004	EXAMINER	
CHRISTIE, PARKER & HALE, LLP			CHANEY, CAROL DIANE	
PO BOX 7068			ART UNIT	
PASADENA, CA 91109-7068			PAPER NUMBER	

1745

DATE MAILED: 12/27/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/880,634

Applicant(s)

CHOI ET AL.

Examiner

Carol Chaney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) 1 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) 7-11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1 and 6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11-1-2004.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 02 December 2004 has been entered.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Ishii et al., JP 2000-012017 A1.

Ishii et al. disclose lithium battery negative electrodes containing graphite and at least two other elements, including boron and one of iron, silicon, nickel and titanium. The amount of boron is 0.05-5 % by weight, and the amount of metallic element is 0.01-5 % by weight. (See paragraph 10 of English machine translation.)

Claim 1 is rejected under 35 U.S.C. 102(a) as being anticipated by Nazri , US Patent 6,183,912 B1.

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Nazri disclose lithium battery negative electrode materials having active materials which are composites of metals and/or nonmetals in a conductive matrix. (Column 3, lines 3-8.) A preferable material for the matrix is graphite. (Column 3, lines 60-62.) Boron is a preferred non-metallic element and Pb, Sn, Bi, Al, Ga, Ge, In, and Ti are preferred metallic elements. (See column 6, lines 59-67.) Preferred embodiments disclose forming composite materials by combining silicon, boron, phosphorous or sulfur in 0.01-0.15 M/l concentrations with graphite which is 15 weight percent in a cyclohexane slurry. (See column 4, lines 35-47.) Since the density of cyclohexane is 0.779 g/cm^3 , 15 weight percent graphite in the slurry is $.1167 \text{ g/cm}^3$. The boron concentration is about $.00165 \text{ g/cm}^3$. Thus, the boron in the composite is about $.00165/.1167$ or about 1.4 weight percent. A similar concentration (0.1M/l) of aluminum, for example, would provide a composite with about 2.3 weight percent aluminum. Thus, the claim is anticipated.

Claim Rejections - 35 USC § 103

Claim 6 is rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Ishii et al. or Nazri.

Since Ishii et al. and Nazri disclose materials identical to those claimed by the applicants, the properties of the materials, including x-ray diffraction spectra, disclosed by Ishii et al. and Nazri would be inherently identical to those claimed by applicants. Therefore applicant's composition is anticipated by Ishii et al. or Nazri, or in the

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alternative, would have been obvious to one of ordinary skill in the art based upon the prior art.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Barker et al., US Patent 5,830,602.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Carol Chaney whose telephone number is (571) 272-1284. The examiner can normally be reached on Mon - Fri 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Carol Chaney
Primary Examiner
Art Unit 1745

21 December 2004